

App. No. 10/729,059
Amendment B
Page 2

Amendments to the Claims

Claim 1 (original): An apparatus for use in deflecting loads, comprising:

a door aperture formed in a facesheet, wherein the door aperture has an edge;

a first load deflector having a length, wherein the first load deflector is curved along at least a portion of its length; and

the first load deflector is secured with the facesheet such that the first load deflector is proximate the door aperture with a middle portion of the curved load deflector is closest to the aperture such that the first load deflector deflects a load.

Claim 2 (original): The apparatus of claim 1, wherein the first curved load deflector comprises a plurality of layers and each layer has an orientation such that at least half of the plurality of layers have an orientation perpendicular to the axial load.

Claim 3 (original): The apparatus of claim 3, further comprising:

a patch bonded with the facesheet proximate the door aperture such that the patch at least surrounds the door aperture.

Claim 4 (original): The apparatus of claim 3, wherein the patch has four quadrants and each quadrant is formed of at least one ply, each of the four plies having an orientation, wherein a first and third quadrant have a first orientation, and a second

App. No. 10/729,059
Amendment B
Page 3

and fourth quadrant have a second orientation where the second orientation is different than the first orientation.

Claim 5 (original): The apparatus of claim 3, wherein the first and third plies have an orientation that is at about a positive 45 degrees with respect to the axial load prior to deflection by the first curved load deflectors, and the second and fourth plies have an orientation that is at about a negative 45 degrees with respect to the axial load prior to deflection by the first curved load deflectors.

Claim 6 (original): The apparatus of claim 3, wherein the patch is formed of at least two plies stacked and bonded with each other on the facesheet such that both plies surround the door aperture.

Claim 7 (original): The apparatus of claim 6, wherein the patch has an orientation that is not parallel with respect to the axial load prior to deflection by the first curved load deflectors.

Claim 8 (original): The apparatus of claim 7, wherein the orientation of the patch is at about 45 degrees with respect to the axial load prior to deflection by the first curved load deflectors.

Claim 9 (original): The apparatus of claim 3, wherein the patch extends over and covers the first curved load deflector.

App. No. 10/729,059
Amendment B
Page 4

Claim 10 (original): The apparatus of claim 9, further comprising a second curved load deflector secured with the facesheet proximate the door aperture and on an opposite side of the door aperture than the first curved load deflector; and the second load deflector having a length, wherein the second load deflector is curved along at least a portion of its length such that the second load deflector deflects the axial load.

Claim 11 (original): The apparatus of claim 1, further comprising a second curved load deflector secured with the facesheet proximate the door aperture and on an opposite side of the door aperture than the first curved load deflector; and the second load deflector having a length, wherein the second load deflector is curved along at least a portion of its length such that the second load deflector deflects the axial load.

Claim 12 (original): An apparatus for use in reinforcing an access door, comprising:

- a first load deflector positioned on a facesheet proximate an access door aperture;

- the first load deflector having a first length such that the first load deflector is curved along at least a portion of its length;

- the first curved load deflector having a first defined curvature such that the first defined curvature of the first load deflector is proportional to a size of the access door aperture;

- a second load deflector positioned on the facesheet proximate the access door aperture;

App. No. 10/729,059
Amendment B
Page 5

the second load deflector having a second length such that the second load deflector is curved along at least a portion of its length; and

the second curved load deflector having a second defined curvature such that the second defined curvature of the second load deflector is proportional to the size of the access door aperture.

Claim 13 (original): The apparatus of claim 12, wherein the first and second curved load deflectors have thicknesses, wherein the first and second thicknesses are proportional to the size of the access door aperture and are dependent on the defined curvatures of the first and second load deflectors, respectively; and

the defined curvatures of the first and second load deflectors are further dependent on the thicknesses of the first and second load deflectors, respectively.

Claim 14 (original): The apparatus of claim 13, wherein the first and second curved load deflectors have widths, wherein the widths are proportional to the size of the access door aperture and are dependent on the defined curvatures of the first and second load deflectors, respectively, and further dependent on the thicknesses of the first and second load deflectors, respectively;

the defined curvatures of the first and second load deflectors are further dependent on the widths of the first and second load deflectors, respectively; and

the first and second thicknesses are further dependent on the widths of the first and second load deflectors, respectively.

App. No. 10/729,059
Amendment B
Page 6

Claim 15 (original): The apparatus of claim 12, wherein the first and second curved load deflectors have widths, wherein the first and second widths are proportional to the size of the access door aperture and are dependent on the defined curvatures of the first and second load deflectors, respectively; and the defined curvatures of the first and second load deflectors are further dependent on the first and second widths of the first and second load deflectors, respectively.

Claim 16 (original): The apparatus of claim 12, further comprising:

an overlay patch secured with the facesheet and surrounding the access door aperture.

Claims 17-20 (cancelled)